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A DUCK'S-EYE VIEW OF SOUTHERN

- THE HIDDEN DANGER IN NEW PRODUCT POLICY
- A WORLD-WIDE LOOK AT EDUCATION FOR BUSINESS

THE HIDDEN DANGER IN NEW PRODUCT POLICY

by Donald G. Frederick

The importance of new product planning to American manufacturers is well-documented by the vast amount of literature that has appeared on the subject in recent years. Almost every business periodical has devoted space to some aspect of the problem. In addition, professional societies, such as the American Management Association, have conducted seminars and published papers on the subject. A recent report published by Booz, Allen, and Hamilton, management consultants, well summarizes the current thinking in the area of new product planning and implementation.

The Booz, Allen, and Hamilton report, entitled *Management of New Products*, presents some interesting statistics on new products. The statistics were compiled in studies of more than 2,000 companies over the past 46 years. For example, the report points out that among the most effective United States companies the record shows that four out of every five products introduced to the market turn out to be failures. These failing products are ones that have emerged from research and development departments as technical successes. The record also shows that even after products are subjected to extensive market testing and full commercialization 50 per cent of them still fail.

The important conclusion that can be drawn from these data is that product failures result in wasted resources. For example, the report points out that seven out of every eight hours devoted by scientists and engineers to the technical development of new products are spent on projects that do not reach commercial success. Resources are also expended on market testing, promotional programs, and other activities that must be performed in developing and marketing new products. The net result is that a great deal more money and time is expended on products that fail than on products that succeed.

Finally, as indicated by Booz, Allen and Hamilton, when the tremendous cost of product failures is coupled with the fact that many companies must produce new products to survive, American business is faced with a serious dilemma. This problem is a result of the high turnover of products on the market. Approximately 50 per cent of the brands on the market today did not exist ten years ago. According to Booz, Allen and Hamilton, this trend will be accelerated, so that 75 per cent of the growth in aggregate sales volume over the next three years will come from new products. Thus, many companies must have a constant flow of new products just to maintain present sales volume, not to mention the products needed for growth.

As a solution to the new product problem, Booz,

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Allen, and Hamilton cite a number of steps that can be taken to improve new product success and increase the efficiency of dollars and time committed to product programs. These steps are summarized below.

1. Top management must adopt the attitude that new products are vital to survival and growth. The new product program must be the responsibility of top management because products are the foundation of the business.
2. New product activities must be formally organized. The evolution of successful new products does not happen spontaneously without planning, organization, implementation and control. In other words, the new product process must be managed like any other business activity.
3. New product programs should be organized around the stages of product evolution, i.e., exploration, screening, business analysis, development, testing and commercialization.
4. Product ideas must be screened and subjected to rigorous testing and analysis at all stages of development. This will insure that marginal products are dropped at the earliest possible time and therefore, at the lowest expenditure of funds.

These are undoubtedly sound suggestions that will assist the company in improving the efficiency of new product programs. However, a word of caution is in order. Just as product failures result in wasted dollars, expenditures for elaborate new product programs might also be wasted. In other words, *the cost of lowering new product failure rates might be greater than the cost incurred in developing and marketing products that fail.* Of the many articles written on the subject, few, if any, point out the possibility of diminishing returns in new product

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A WORLD-WIDE LOOK AT EDUCATION FOR BUSINESS

by Thomas H. Carroll

I have been concerned with education for business competence and responsibility for some twenty years—as a Ford Foundation officer and prior to that as a business school professor and dean. During these past two decades business education has expanded at a spectacular rate. Today some 600 institutions of higher learning have schools or departments of business administration and nearly one college student in seven is a major in business. In view of the magnitude of the field, if for no other reason, business administration should be a major concern of educators generally, not only of those whose special field it is.

Much more impressive than the rate of growth has been the changing concept of higher education for business. Since World War II the more vigorous schools of business throughout the nation have shown an increasing tendency to abandon the vocational orientation of the past in favor of a more rigorous professional curriculum. The improvement in the curriculum was made possible by a succession of new developments, particularly in the application of the social sciences and quantitative methods to business problems. I understand that the School of Business was established in its present form here at Southern Illinois in 1957, although a business program was available before that time. Your school is in the fortunate position of being able to take advantage of some of the truly revolutionary and exciting developments that have taken place in the field during the recent past.

Since its inception in 1954, the Program in Economic Development and Administration, for which it is my privilege to have officer responsibility in the Ford Foundation, has been actively engaged in strengthening business education. The Foundation has invested more than \$20 million in attempts to meet that objective. These funds were used to advance collegiate education for business in a variety of ways: (1) A major effort was made to improve doctoral training and research in business through support of doctoral programs. It is now generally recognized that the doctor's degree is just as important for the business faculty member as to his university colleagues in other fields, including the other professional fields. It is also recognized increasingly that productive research not only creates new knowledge but enlivens teaching. Accordingly, a program of doctoral and faculty fellowships was established, the first of its kind in business administration. (2) A comprehensive survey of the status of business education was commissioned and the resulting report was given widespread circulation. The volume, entitled *Higher Education for Business*, prepared by Professor R. A. Gordon of Berkeley with the assistance of Dr. J. E. Howell, and others, contains recommendations for a "widespread and fairly drastic" reform of college and university educa-

tion for business. It was given widespread distribution in the hope that consideration of the findings would contribute to the improvement of business education. The volume was never looked upon as a rigid blueprint for all schools to follow. Rather it was hoped that its analytical approach and suggestions would lead to the development of a variety of creative programs each of which would be characterized by rigor, imagination, and a suitable combination of breadth and depth. This hope is in process of at least partial fulfillment. (3) A special program was mounted to promote the more intensive application of the relevant social sciences, mathematics and statistics to the study and teaching of business. This has been done in part by enabling selected schools of business to bring social scientists to their faculties and in part by offering fellowships for business faculty members to expand their knowledge of methodology in mathematics and the social sciences. (4) In order to promote effective dissemination of information on new and developing approaches to business education, a series of summer seminars for business faculty members were established.

As a result of changes now under way, it can be reasonably expected that the business school of the sixties will have a different look. In the first place, there is now in process a substantial movement in the direction of less specialization and this is likely to continue. The tendency is to substitute a few basic courses dealing with broad areas of managerial decision-making for the multiplicity of specialized courses. We can expect that the principal emphases will be on courses in administration and organization, economic analysis and quantitative methods.

The precise content of the so-called core curriculum will depend upon the level and purpose of the particular program. At the undergraduate level business programs must concern themselves with providing a broad liberal education as well as specialized training for business. It is my sincere conviction that this can be effectively done. I make that statement even though I find no difficulty in preferring a professional program in business administration at the post-bachelor level following a truly liberal undergraduate program in the arts and sciences or a broadly-based, non-vocational undergraduate program in engineering wherever such a combination is feasible for the student, financially and otherwise.

Business and non-business courses can be integrated within the framework either of a liberal arts college or of a school of business. The important element is not the proportion of business to non-business courses in the curriculum. What is important is the manner in which the course is taught.

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Both the business and non-business courses must be broad in outlook and rigorous in analytical content. The strictly how-to-do-it approach belongs more properly in the on-the-job training. Collegiate education for business should provide training in the fundamental analytical tools that are essential to the solution of a wide variety of business problems.

The collegiate school of business is primarily an American phenomenon of the twentieth century. Indeed the entire pattern of education for business, encompassing collegiate, graduate and management training programs, is primarily American in inspiration. It developed as a response of a democratic and highly dynamic society to the educational needs of its industrial system. As a nation, we have invested and continue to invest huge sums annually in these activities. It is not surprising, then, that the competence and professional standards of American management enjoy a world-wide reputation.

Prior to World War II higher education for business was not available outside of the United States. European universities resisted the introduction of business administration just as they had opposed the introduction of scientific studies a century earlier. Partially as a result, a large number of European students were attracted to business schools in this country. But the post-war drive for economic rehabilitation and advancement created tremendous pressures for the establishment of formal training programs. Unlike the United States' case, however, the initiative abroad came not from the universities but from business or government, or both.

As a Ford Foundation officer, it has been my good fortune to be able to study international management development on the spot in many parts of the world. In my opinion, the development of professional management is the "key" to effective economic development both in the highly-developed and in the lesser-developed countries.

This past summer I participated in seminars in Brazil, Argentina, and Chile and in less formal meetings in Uruguay, Peru and Colombia on the subject of management and labor problems in the process of economic development. Great stress was placed in these meetings upon skilled manpower needs of various types and at various levels, and especially upon the adaptability of the educational system of a developing country, particularly its institutions of higher learning, in recognizing and attempting to meet the high-level manpower needs of the industrializing society. Similar discussions were held during the winter of 1959 in the Middle East, in South and Southeast Asia, and in Japan. Earlier this year I participated in the International Management Congress in Australia and recently I attended the conference on Management Education in Europe held under the auspices of the European Productivity Agency of the Office of European Economic Cooperation in Paris. I mention these activities in some substantiation of my overwhelming belief that there is a dramatic awakening in industrially-advanced and lesser-developed countries alike, to the importance of management and of the need

to educate for it. I should like this evening to share with you some of my views concerning the spread of business education throughout the world.

It has long been known that the progress of a nation depends to an important degree on the organization with which it develops its human and material resources. Indeed, the significance of organization to the economic life of a nation was pointed out by Adam Smith. Throughout the nineteenth century, however, it was assumed that management was a natural talent, a quality which was largely inherited. The precise functions of management were only dimly perceived and were gradually thought to consist primarily of common sense, sagacity and/or intuition.

At the turn of the century the work of Frederick Winslow Taylor in the field of scientific management directed attention to the functions of management in a more systematic way. The concept of management as a profession dates from about that time. Within the short span of a few decades management education became firmly established in the American academic structure.

A more recent innovation in management education is the development of training programs for practicing executives. Some of these have been university-sponsored and some company-conducted. The first of the university programs was the Sloan Program initiated at M.I.T. in 1931. This was for middle-management. The first top management programs were developed during World War II at Harvard and Chicago. By and large, however, this type of program did not expand rapidly until the past decade. In 1950 there were only four such programs. Today there are over fifty. They vary widely in scope and character. They may be for junior, middle or advanced management. They may range in duration from a few weeks to a full academic year. And they may be very general or quite specialized. Likewise, company-sponsored executive development programs have experienced virtually all their expansion since World War II.

Although business education abroad has lagged far behind that of the United States, most countries now provide some kind of training in the field. In each country in which management development has been undertaken during the post-war period, programs have been adapted to indigenous economic, political and social systems as well as to existing educational institutions. This, of course, is as it should be. Neither American business methods nor business education can be exported for complete and unadulterated adoption abroad. Potential adaptation must be the keynote. In Europe and in other parts of the world outside North America the more common institutional home for business education is the special institute. Typically these institutes are independent of universities or loosely associated with them. They do not constitute an integral part of university structure.

In Great Britain, for example, there are very few full-time university degree courses in business administration and none even roughly parallel to

those offered in the United States. As recently as this past summer the London *Economist* commented:

It is taking a very long time to bring the British universities round to any extensive provision of courses—whether undergraduate, postgraduate or extra-mural—for business management. A beginning has been made, but we have nothing, either as sternly academic or as frankly vocational, to compare with the management training available in the United States.¹

The two principal types of business curricula available in England are vocational or part-time studies leading to a diploma or certificate and, at the advanced management level, short term residential courses. The former course of study was established in 1947 as part of the so-called National Scheme of Management Studies.² The Diploma in Management Studies has been awarded jointly by the British Institute of Management and the government. The courses are conducted at approved technical colleges throughout the country, of which there are over 200. This year a new diploma course of higher standards with greater emphasis on full time study was authorized. At the same time a United Kingdom Advisory Council on Education for Management was set up. It will have representatives of educational institutions, management associations and industry.

In the area of advanced management training at the other end of the scale, the twelve year old Administrative Staff College at Henley has achieved a well-deserved reputation for accomplishment. It offers a three-month residential course for senior and middle managers of private firms, government agencies, and trade unions.

Largely because of the historic family orientation of continental business firms and of the non-professional or non-vocational outlook of the European universities, management education was late to develop in Europe. The "institute" approach, to which I have already alluded, has been characteristic on the Continent. For example, in Belgium the Fondation Industrie-Université was founded in 1953 to encourage collaboration between universities and industry in the development of management education. Its primary function is the coordination of the work of four Belgian university management training and research centers at the universities of Brussels, Liège, Louvain and Ghent.

The European Productivity Agency of the OEEC has been instrumental in promoting a number of management training centers since its establishment in 1950. Time does not permit much specific reference to these developments. One of the newest and most ambitious programs on the Continent deserves mention, however. It is the European Institute of Business Administration at Fontainebleau, established in 1959. It is sponsored by the International Chamber of Commerce, the European Productivity Agency, and the European League for Economic Cooperation, and has been given important initial

financial support by the Paris Chamber of Commerce. I single it out for mention only because of its European rather than national approach. It offers a ten-month residential course at the post-bachelor level. Courses are conducted in French, German and English by an international faculty, including some professors from the United States. Each subject is studied from the multi-national viewpoint with a special emphasis on the development of European cooperation.

Management development programs are by no means confined to the advanced industrial countries. They may now be found even in countries that are in the early stages of industrialization. In many of these countries the concept of professional management has historically been hindered not only by the limited size of the industrial sector of the economy but also by environmental factors such as family domination of business enterprise. Professional management cannot thrive in an atmosphere in which an incompetent relative takes precedence over the most highly skilled outsider. The necessities of industrialization have gone a long way toward overcoming such obstacles to the development of native managerial resources.

In setting up management development programs, the lesser-developed countries have had to rely to a substantial extent on assistance from the United States. American teachers of business can be found in such diverse places as the University of Punjab in Pakistan, the Vargas Foundation in Brazil, the Management Development Institute in Cairo, the University of Istanbul, the University of Rangoon, the Management Institute in Kashmir, India, and the Catholic University of Valparaiso in Chile. The highly successful Advanced Management Program in the Far East at Baguio in the Philippines has been conducted entirely by faculty members of the Harvard Business School.

In the United States business and public administration have traditionally, perhaps unrealistically, been kept in separate compartments. There are a few schools of business and public administration in name, but by and large a really effective integration has yet to be achieved in this country.

In countries where the government plays a major role in economic development, however, it has been necessary to direct management development to the needs of the public administration and the public business sector, as well as of the private business sector. For example, in India the Board of Management Studies, appointed by the Government of India in 1950, recommended the establishment of curricula which deal with the principles and practices of management common to all forms of enterprise, whether public or private. Part-time evening post-graduate courses for junior managers were established at leading Indian universities, including Delhi University and the University of Bombay. The Board also established an Administrative Staff College at Hyderabad which was patterned closely after the one at Henley. This offers a three-month residential program for middle and senior manage-

ment from central and state government agencies and private corporations.

In Latin America business education follows the North American system more closely. In Brazil a School of Business Administration was established at Sao Paulo in 1954 under the joint sponsorship of the Vargas Foundation and the International Cooperation Administration. Technical assistance for the program has been supplied by faculty members of Michigan State University. The School provides a four-year undergraduate program as well as a graduate program in business administration. In addition, it offers a thirteen week Intensive Course in Management for experienced business executives. Such a combination of offerings is still comparatively rare outside of the United States. In the long run the industrializing countries will not only have to develop indigenous management resources but also indigenous professors to train management. They simply cannot rely on outside assistance beyond the initial stages. To help meet the needs of training foreign teachers of business administration, a special program will soon be established at Stanford University. It will be conducted in cooperation with a group of business schools with overseas interests and experience and financial support of the Ford Foundation. This new program will provide post-graduate training for teachers of business administration from countries of Africa, Asia and Latin America where economic development has been impeded by the acute shortage of managerial skill. It is expected that up to sixty participants will be admitted each year. Each participant will spend some nine months at Stanford and three months as a visiting faculty associate at a cooperating American business school. One purpose of the three-month residency is to help narrow the gap prevalent in many less-developed countries between business teachers and the business community. Participants in the program will have an opportunity to observe the active concern prominent American business school faculty members take in the practical dynamics of the business world.

Teaching materials for the program will be developed initially from the body of research on economic and business development that has accumulated in recent years at American university centers and graduate schools of business. The bulk of the research product from these two sources has not been brought together and translated into teachable form. Thus, in addition to creating an advanced curriculum specifically related to the needs of business teachers from less-developed countries, the program should result in the production of teaching materials highly useful both to foreign teachers in their own classrooms and to teachers of American business schools concerned with foreign and international business operations. The emphasis will be on comparative studies. At the Ford Foundation we look upon this program as technical assistance in its most advanced form. It may constitute the last stage short of complete national independence with regard to management development. It may be expected

that contributions from other highly developed countries will be forthcoming as the institute develops. Their contributions can be both material and human. Certainly the European countries, for one example, can well afford to contribute and there is expertise that is exportable for adaptation.

Inasmuch as I have confined my remarks to areas about which I have first hand knowledge, I have not previously mentioned management training behind the Iron Curtain. The Soviet Union does not underestimate the importance of management training. On the contrary, the remarkable rate of industrial development and economic growth which has been achieved under the five-year plans could not have been accomplished without a heavy emphasis on managerial resources. At an early stage the Soviets found that the functions of management had to be performed whether enterprises were owned by the government or by private individuals. A recent study has reported that political management of industry has now given way to professional management.³

The Soviet educational system does not, however, provide formal managerial training as such. Rather it is conceived of as applied engineering. Strong emphasis has been placed on providing managerial training to engineering graduates. In the past, general education was not considered essential but it is interesting to note that broader theoretical education is now being stressed in keeping with the trend in the United States to which I earlier referred. There is no evidence, however, that research on management problems has reached anything like the stage it has in the United States.

I have tried to give you some idea of some of the elements that account for what I consider to be a revolution in education for business in the United States. I believe that we are on the threshold of further great changes in all phases of management development. Recent modifications may be expected to spread, and, in the process should be adapted and further improved. World leadership in management training rests with the United States. This fact carries both opportunities and responsibilities. As President Eisenhower has said:

If we grasp this opportunity to build an age of productive partnerships between the less fortunate nations and those that have already achieved a high state of economic advancement, we will make brighter the outlook for a world order based upon security, freedom, and peace. Otherwise, the outlook could be dark indeed. We face what could be a turning point in history, and we must act decisively.⁴

One of the most valuable forms of assistance we can offer the less-developed countries is aid designed to increase and improve their managerial resources in order to promote economic development that will make possible a substantial rise in the living standards of the people of those countries. In so doing, we must recognize and respect differences in environment factors, in social mores, in cultural heritage, and, sometimes, in language. The export

model of the career executive will certainly not be identical with his North American counterpart. Desirable changes in attitudes, approaches and methods of managers abroad cannot be imposed from without—except by methods which sooner or later will involve strong-arm tactics so thoroughly repugnant to the American mentality. Such changes may be expected to flow from the understanding of enlightened managers in the less-developed countries.

The task before us is tremendous but the potential satisfactions are great. Universities have a special responsibility to help meet these international obligations. It is our responsibility to maintain, and even increase, the momentum that business education has now achieved. It will require adherence to rigorous standards of teaching in all of our colleges and universities and full support of basic research. In addition, it will require an outlook that is nothing less than world-wide. Only in this way will education generally, and business education in particular, make its maximum contribution to national and world economic and social well-being.

¹ *The Economist* (London), August 20, 1960, p. 717.

² European Productivity Agency, *European Guide to General Courses in Business Management*, p. 637.

³ Frederick Harbison and Charles A. Myers *Management in the Industrial World* (McGraw-Hill, 1959) p. 332.

⁴ Quoted by Paul G. Hoffman, *One Hundred Countries and One Quarter Billion People*, published by the Committee for International Economic Growth (Washington, 1960), p. 10.

THE HIDDEN DANGER IN NEW PRODUCT POLICY

(Continued from page two)

programs. Yet, it seems entirely likely that diminishing returns do in fact exist.

When one considers the resources needed to implement a new product program in terms of organization, executive time, research, development, and so forth, the cost can reach phenomenal proportions. It seems logical, therefore, that a company should be willing to accept a certain proportion of failures, regardless of the fact that such failures could be prevented by a greater expenditure of funds. In other words, there must be an optimum point between effort to increase new product success, and acceptance of product failure. Both alternatives cost money, but the least cost combination is the goal toward which a company should strive.

The inherent risk in introducing new products supports this point. Because of the uncertainties of the market, some products will always fail—few would disagree on this point. The important question facing the business firm is *what* proportion will fail regardless of the soundness of product programs, and expenditures to insure success. Perhaps a 50 per cent, or even an 80 per cent, failure rate is not too high when the many variables that in-

fluence product success are taken into account. Market demand results from many forces that can not be accurately measured with existing research techniques, even though great strides have been taken in this respect in recent years. At best, the introduction of new products is a highly hazardous endeavor.

The foregoing argument should not be interpreted as an appeal for the elimination of efforts to lower product failure rates. Undoubtedly, many firms can benefit from a close inspection of the organization and implementation of product strategy. However, it must be recognized that a point of diminishing returns does exist, and each firm should attempt to find that point before rushing into large expenditures for new product programs.

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